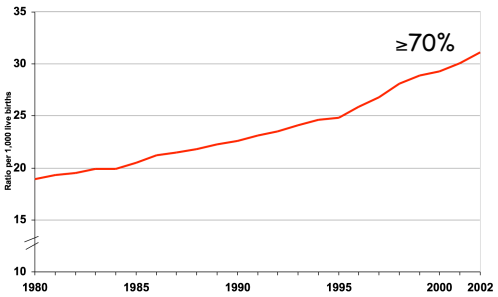
Breastfeeding Twins & Higher-Order Multiples

1. Identify perinatal conditions and events that frequently affect initiation of breastfeeding and lactation after a multiple birth.
2. Describe interventions for initiating and maintaining breastfeeding specific to multiple-birth neonates.
3. Identify breastfeeding issues unique to older infant or toddler multiples with discussion of related interventions.

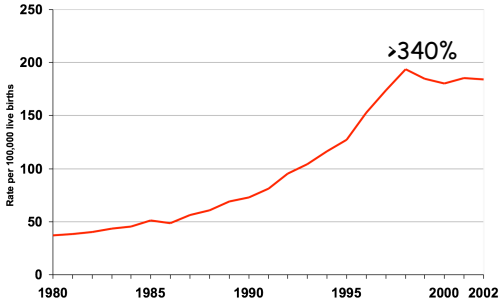
Twin Birth Rate: USA, 1980-2004



NOTE: Twin birth rate is the number of live born infants in twin deliveries per 1,000 live births.

Source: Martin et al, CDC, NCHS, 2004, 2006

Triplet/+ Birth Rate:USA, 1980-2004



NOTE: Triplet/+ birth rate is the total number of live born infants in triplet+ deliveries per 1,000 live births. Triplet/+ includes births in greater than twin deliveries.

Source: Martin et al, CDC,NCHS, 2004, 2006

Considerations When Working With BF MOT/MOM

- Multiples strain maternal physical and emotional resources long term
- Multiples affect the dynamics of every relationship within a family
- But no matter how many are in a set:
  - Infants are the least mature members of a family
  - Each infant's physical and emotional needs do **NOT** change

Feeding Considerations for 2, 3, 4, More…

Role of infant feeding…More than a task

- Adequate Nutrition
  - Adequate physical growth
  - Adequate development
- Psychosocial Development
  - Bonding with/↑ trust in:
    - Primary caregiver
    - Self
  - Meal times are social times

Breastfeeding Multiples: Situation-Based Goal Planning

- Number of multiples affect:
  - Physical management
  - Time management RT 8-12 feedings
  - Control/↑ need for routine
- Physical health of each newborn/infant
  - Length of gestation
  - ↑ Likelihood RT perinatal distress/complications
- Maternal knowledge
- Maternal health and well-being
  - ↑ Likelihood of maternal complications

Initiating Breastfeeding: Infants-Related Barriers

- Preterm birth (↑ LBW & ↑ VLBW)
  - 50% Twins
  - >90% HOM
- Growth restriction (IUGR/SGA)
- Fetal distress
- Congenital anomalies
  - 8.3% all twins v. 2.4% singletons
  - 12-15% MZ multiples

Maintaining Breastfeeding: Infant-Related Barriers

- Long-term effects of prematurity, birth-related or congenital conditions
  - Ongoing infant(s) feeding difficulties
    - Developmental delays
    - Complications RT system immaturity
      - BPD
      - ↑ GERD
    - Intrauterine positional anomalies, e.g. torticollis
- ↑ Healthcare treatments = constant appointments

Maternal Physiologic Factors

- Anemia RT ↑ postpartum blood loss/↑ PPH
- Recovery RT surgical delivery
- Effects of strict antenatal bed rest
  - Muscle atrophy
  - Cardiac deconditioning/↑ DVT
- Recovery from multiple pregnancy
  - ↑ Complications & related medications
- ↑ Insulin resistance
  - GDM, ↑ likelihood of PCOS
- ↑ PP thyroid conditions
- Sleep deprivation

* All factors may decrease maternal resistance to illness

Maternal Emotional Barriers

- ↑ Postpartum Mood Disorders (PPMD)
- Anxiety RT caring for multiple infants
  - Unrealistic expectations
  - Scope of tasks
  - Physical management/logistics
- ↓ Long-term physical/emotional support
  - Isolation
  - Sense of being overwhelmed/out of control
  - Emotionally labile RT sleep deprivation

Initiating Breastfeeding with Full-Term, Healthy Multiples

- Early, frequent BF by each multiple
- Full or partial rooming-in/KMC = ↑ access
  - All babies BF for all feedings
  - In-hospital family or friend physical support
- Adequate latch-on & suckling/multiple
  - All demonstrate nutritive, sustained suckling
  - ⦸ Simultaneous BF until individual assessment
- Re-assessment
  - Individual dyad outcomes

Initiating Breastfeeding with Healthy, Late Preterm/Near Term Multiples

- Early, frequent BF by each multiple
- Full or partial rooming-in/KMC = ↑ access
  - All babies BF for all feedings
  - In-hospital family or friend physical support

Breastfeeding LPT/NT Multiples

- Assessment of latch-on & suckling for each multiple
  - All demonstrate nutritive, sustained suckling
    - ↑ Risk for Ineffective BF/Ineffective Feeding Pattern
  - ⦸ Simultaneous feeding until individual assessment
- FREQUENT re-assessment
  - Individual dyad outcomes
  - Intervene p.r.n.

Initiating Milk Production for Ineffective or Interrupted BF

- Need for Compensatory, Mechanical Milk Expression
  - Early initiation @ birth (≤6 hours post-birth) RT ↑ BF duration
    - ≤24 hours post-birth RT Ineffective BF
    - Frequent → *at least* 8-10x/24 hr (>100 minutes/24 hrs)
- Delays common after multiple birth RT:
  - Poor maternal condition
    - Who implements milk expression/pumping?
  - Poor infant(s)' conditions – "Don't need much milk yet…"

Initiating Milk Production for Interrupted Breastfeeding

- *Rental* hospital-grade, electric pump
- Double collection kit
  - Breast massage before/during pumping sessions
  - Properly fitted flanges
- Assess for physical/psychosocial barriers RT:
  - Adequate number pumping sessions
  - Achieving adequate milk volume

First Two Weeks: Post-Birth Pumping

- C**ritical period** RT achieving optimal milk production
- RT 24-hour expressed milk volumes by day 10-14:
  - Optimal = 750-1000ml (25-33oz) per 24 hours
  - Moderate = 500-750ml (16.5-25oz) per 24 hours
  - Low = 350-500ml (11.5-16.5oz) per 24 hours

From Interrupted to Effective Breastfeeding

Individualized Transition

EBM-feeding

↓

Kangaroo Care/Nuzzling

↓

"Dry"/Non-nutritive Breastfeeding

↓

↑ "At Breast" RT Cues, Nutritive Suckling

"Practice" BF }

Expect each baby to progress at his/her own pace!

Post-Discharge Barriers to BF

Breastfeeding affected by:

- Individual infant progress
- Staggered discharge = divided time
- Post-D/C "Ineffective Breastfeeding"
  - BF = learning process/each multiple
  - Continued compensatory milk expression
- Infant care tasks now 24/7
- Maternal physical & emotional condition

Don't LOSE long-term BF due to unrealistic interventions!

Ineffective Breastfeeding: Time IS the Enemy!

- ↑ Mother-infant(s) skin contact/KMC
- Brief BF RT cues/each baby
  - ↑ Time at breast RT outcomes
    - Baby-moon → 1 at a time
  - Feed simultaneously with effective feeder
- Pre-/post-feeding weights
  - How often?
  - How long?

Alternative Feeds & Breastfeeding Outcomes

- Methods RT ↑ tedious long-term
  - Tube systems → at breast (BF ability; ↓ help); finger-feeding
  - Syringe-feeding
  - Cup-feeding → ↑ spillage/↓ measurable for intake
- Method RT ↑ familiar/↓ tedious/↓ "stressful"
  - "Physiologic"; cue-based bottle-feeding (BoF)
    - BF & BoF ≠ Mutually Exclusive!
    - Teat/technique to ↑ oral behaviors of BF
- Potential for "relief" feeders
- All = ↑ Potential for early weaning

Alternative Feeds: Time = Enemy

- Best alternative feeding device includes:
  - ↑ Progression to BF
  - Ease RT appropriate use of device
  - Adequate ongoing milk expression
- ∅ Evidence re: which devices RT improved BF outcomes

Burden of Pumping: Time = Enemy

- Reinforce & provide perspective re:
  - Milk production physiology
  - Benefits for babies and mother
  - Short-term time investment (usually)
- Make it easier
  - Revise pumping plan RT household "reality"
    - Cluster/"power" pump
    - Night pumping sessions with night waking
  - Hands-free pumping

Breastfeeding "Time Out"

- ↓/⃠ "Practice" BF for 1+ days
- Focus on ↑ milk expression
  - **Priority** = adequate milk production
    - Review equipment, routine, technique
    - Pumping session log
  - ↑ Maternal rest/sanity
    - Encourage help with alternative feedings
- ↑ Kangaroo Mother Care (KMC)

Monitor Pumping Sessions

Weekly Breast Pumping Log for Full Breastmilk Production

By 10-14 days postpartum, the amount of milk you should obtain with a breast pump in 24 hours:

Ideal: 750-1000ml (25-33oz)

Borderline: 350-500ml (11.5-16.5oz)

Low: less than 350ml (less than 11.5oz)

Day of Week: **D a te:**

Session	1	2	3	4	5	6	7	8	9	10
Time										
Minutes										
Amount	ℓ / L	ℓ / L	ℓ / L	ℓ / L	ℓ / L	ℓ / L	ℓ / L	ℓ / L	ℓ / L	ℓ / L

Comments: _____

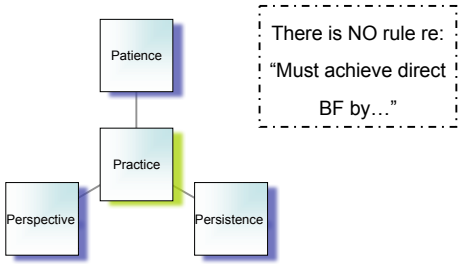
Day of Week: **D a te:**

Session	1	2	3	4	5	6	7	8	9	10
Time										
Minutes										
Amount	ℓ / L	ℓ / L	ℓ / L	ℓ / L	ℓ / L	ℓ / L	ℓ / L	ℓ / L	ℓ / L	ℓ / L

Comments: _____

Bethesda North Good Samaritan TriHealth

Progression of ≥2 to Direct/Full Breastfeeding



Making up for a Poor Start: Effective Breastfeeding

- ↑ Mother-infant(s) skin contact (KMC)
- ≥ 10-12 BF/baby
  - Cue-based BF/each multiple
  - "Babymoon" round-the-clock BF with 1 multiple at a time
- ↓ Amount/alternative feed/baby
- Monitor infant outcomes RT intake
  - Test-weighing/daily weights p.r.n.
- Compensatory milk expression p.r.n.

The How-To of Effective Breastfeeding With Multiple Infants

Differentiation: Effects on Breastfeeding

Maternal and support system confusion RT multiples':

- Different approaches to feeding, including cueing
- Variation in number of daily feeds
- Variation in length of feeds
- Range of ability to sustain suckling, including effect of ongoing health issues

Maternal desire to treat all infants equally versus individuals with differing needs…

Effect of Zygosity on Differentiation

Monozygotes = ↑ similar:

- Temperament
  - Behavioral approach
  - Activity level
  - Ability to be comforted, habituate, etc.
- Body clocks/sleep-wake cycles
- Feeding patterns
  - Number of feedings
  - Average length of feedings
- Growth & Development

Effect of Zygosity…

Dizygotes (same sex) = varies RT:

- % Shared genetic material

Dizygotes (B/G) = ↑ different:

- Temperament
- Body clocks
- Feeding Patterns
- Growth & Development

Coordinating Effective BF: Feeding Rotation*

1. Each breast/each baby/each BF
   - ↑ Use in immediate postpartum
2. Alternate breasts for 1/feeding
   - ↑ Use in immediate postpartum
3. Alternate breasts/24 hours
   - ↑ Use re: adequate production
4. Assign each baby a breast
   - Disadvantages re:
     - ↑ Breast size variation
     - Later BF strike and BF baby won't take "unassigned" breast

*Adapt RT odd-numbered sets—triplets, quints

Assign Each a Specific Breast…

- Obvious infant preference/difficulty with one
- Infant s/s related to:
  - Overproduction
  - OAMER
  - Lactose overload
    - Foremilk :: Hindmilk imbalance
  - Reflux/GERD
  - Torticollis, cranial deviations
- Some maternal nipple soreness/damage issues
- Length of "assignment" RT outcomes

Coordinating Effective Breastfeeding

- Nursing station
  - Living area vs. nursery
  - Adequate, comfortable chair or sofa
  - Table for snacks, beverage, remotes, phone

IDEAL Nursing station for MOT/MOM

- Roomy rocker, recliner
- Built-in commode
- Helmet with built-in cup-holder with straw to mouth

Simultaneous or Separate BF?

- Mother and each infant influence RT:
  - Variation in infants' feeding patterns
  - Maternal need for routine
- Initiation of simultaneous feeding – NO RUSH!
  - WAIT until at least one latches/BF effectively
  - Varies – day 1 to several months
- Some mothers:
  - Feed simultaneously during early infancy
  - Feed simultaneously more after early infancy
- Most combine simultaneous/separate feedings

Advantages of Separate Feedings

- Individual maternal time with each infant
- Response to individual cues if infants' needs differ
- Less likely to result in nipple damage if one or more has latch-on or suckling difficulties

Simultaneous Feeding

- Advantages
  - Time savings
  - Effective feeder may facilitate feeding for a "close but not quite effective" co-multiple
- Disadvantages
  - Reinforce ineffective BF behaviors
  - Discreet BF is difficult!
    - Early – not enough hands
    - Later – multiples' interactions at breast

Simultaneous Breastfeeding Positions

Double Clutch

Double Cradle

Cradle-Clutch

Straddle-Saddle

Full vs. Partial Breastfeeding

Full vs. partial breastfeeding RT:

- Breastfeeding initiation
- Infants' changing abilities
- Milk production
  - Reality
  - Perception
- Support system = physical & emotional
- Maternal confidence/maternal goals

Full vs. Partial Breastfeeding

- Full BF = optimal physical/emotional benefits
  - Achieved for 2-4 infants for weeks-months
  - May move from Partial or EBMF to Full
- Partial BF = dose-related physical benefits
  - Any BF is better than no BF
  - Allows for help with feedings, e.g. nighttime
  - Provides time to work through BF problem
  - May move from Full to Partial

Partial Breastfeeding

Alternative feeding:

- Infrequent/"relief"/p.r.n. = ≤1-2/week/baby
- Frequent = ≥3/week/baby
- Alternating = ≥1/day/baby

Feeding type:

- Complement—"top off" a BF
- Supplement—replace a BF

Partial Breastfeeding Management

Risks RT:

- Maternal
  - ↓ Production
  - Plugged ducts/mastitis RT ↑ milk production for multiples
- ≥1 of Multiples
  - ↑ Difficulty transitioning/maintaining BF oral behaviors
    - Alternative feeding method ↓ compatible with BF oral behaviors
  - Early weaning

Making Partial Breastfeeding Work

- 8 (minimum)-≥12 total BF/day/divided feedings
  - 4-5 BF/twin/24 hours
  - 3 BF/triplet/24 hours
  - 2-3 BF/quad/24 hours

Expressed-Breastmilk-Feeding

- Advantages
  - Optimal nutrition for each multiple
  - ↑ Immunological benefit (vs. NONE for formula)
- Disadvantages = ⦸ the same as direct feeding
  - Properties of human milk affected by cooling/heating
  - Psychosocial
- Length EBMF can be maintained
  - Months IF adequate, effective milk expression
  - ↑ Outcomes = rental, hospital-grade, electric breast pump

Full EBMF of ≥1 of Multiples

- Maternal feeding decision RT:
  - ≥2 preterm, ineffective breastfeeders
  - ≥1 with ongoing BF difficulty RT:
    - Congenital anomaly
    - Ongoing health condition
  - ↓ Time to work with:
    - Ineffectively breastfeeding or EHMF-infant(s)
    - Breast/nipple soreness
  - Feeling overwhelmed, role strain
- ↑ Kangaroo mother care (KMC) with affected infant(s)

Supportive Breastfeeding Strategies

- Assess and provide perspective RT:
  - Breastfeeding issues vs. multiples issues
  - Duration of feeding frequency
- ↑ Maternal confidence
  - Infants' individual abilities/feeding needs
  - Mother's ability to:
    - Produce adequate milk
    - Adapt to infants' differing/changing needs, G&D, etc.

Common BF Issues/Concerns

- Insufficient milk production
  - Perceived RT ↑ daily total # feedings
  - Real/True: infant(s)- vs. mother-related
    - Infant → ineffective breastfeeding (or inadequate pumping)
    - Maternal → health condition/history
- Persistent sore breasts/nipples
  - Persistent latch/suckling difficulties
  - Candida RT ↑ maternal & infant antibiotic treatment

- Psychosocial – time/maternal role "burden"
  - Sleep deprivation
  - ∅ Help with feedings
  - Mother of "litter" feeling
  - PPMD
- Overproduction/OAMER/Overfeeding
  - s/s Lactose overload
  - GER/GERD
  - Maternal ↑ plugged ducts

Strategies

- Recommend short- or long-term flexibility RT:
  - Individual infant feeding routines
  - Differing individual infant styles
- Offer options + Any:
  - Benefits
  - Risks
- Refer her to other breastfeeding MOM

Don't LOSE long-term BF due to unrealistic interventions!

Developing a Daytime Feeding "Schedule"

- Explore realistic expectations RT:
  - Infants' differences: care needs, sleep-wake, etc.
  - Parental role
  - Differentiation process, etc.
- Review feeding charts:
  - Feeding outcomes
  - Individual pattern development

Developing a Daytime Routine…

- Explore benefits/risks* RT imposing ↑ routine versus cue-based response by:
  - Waking to feed after observing light sleep behaviors
  - Waking 2nd to feed with/just after other multiple(s)
  - Making one wait longer to feed with other(s)

*Risks RT disruption or ignoring individual infant cues

Nighttime Perspective

- Separate night-waking from the set (of multiples)
  - Sleep cycles take months/years to develop
  - May vary for individual multiples within a set
  - Wait ≥6 months* before introducing gentle "conditioning" techniques

* Age adjusted for term vs. chronological

Developing a Nighttime "Schedule"

- When to feed
  - Cue-based → individual infant
  - Wake one to feed with/after another
- Where to feed
  - Bed – breastfeeding only!
  - Up

Interventions for Night Waking/Feedings

- Introduce (flexible) bedtime "routine"
- Snugly swaddle each before last evening feeding
- Play "white" noise, e.g.:
  - Intrauterine or nature sounds
  - Motor hum → vacuum cleaner, etc.
  - Classical music/soft lullaby

When Multiple Infants Wake at Night…

- Environmental considerations
  - Darkened room → minimal lighting
  - ↓ Verbal interactions
- Wake one to feed with/after another (p.r.n.)
- Alternate night feedings (partial BF)
  - Two parents/helpers take turns through single night
  - Night "call" – one parent/helper handles all feedings for a night

What About Bedsharing?

- Mother-infant(s) SAFER co-sleeping
  - Safe surface
  - Non-smoking, unimpaired parents
  - 1 vs. 2 in bed?
  - ⦸ Fluffy bedding
  - ⦸ Overheating
- ↑ Safety RT sleep deprivation survival
- Parents' bed
  - Wall-to-wall mattresses
  - Futons
- Mattress on floor of infants' room

Other Sleep Arrangements for Multiples

- 1 or 2 cribs near/next to parents for ≥6 months
  - ↑ Safe sleep
  - ↑ Breastfeeding
- Co-bedding → 2 in 1 crib
  - ↑ Synchronous infant sleep
  - Side-by-side or Head-to-head (of crib)
    - ⦸ Significance
  - Concerns (parent/professional)
    - Overheating → ⦸ evidence
    - Suffocation → ⦸ evidence
  - Instruct parents → ⦸ need to introduce unsafe bedding

Introducing Solid Foods x2, 3 or more

- ↑ Temptation to introduce ≤ 4 months*
  - Willing to "try anything" to:
    - ↓ Daily # BF
    - ↑ Maternal uninterrupted sleep period
  - Remind to breastfeed first
- Iron supplementation RT individual blood count
- Introduce RT individual s/s readiness
  - MZ multiples = ↑ similar RT readiness
  - DZ = ↑ diverse RT readiness

* Assess RT age-adjustment for gestational vs. chronological age!

Introducing Solids…

- Create assembly line to ≥2 feed
  - 1 bowl/jar and 1 spoon
  - Give each a spoon/diversion to hold
- Family meals
  - Encourage ASAP
  - Each parent supervises ½ set
  - Introduce finger foods ASAP
  - Seat at opposite ends to ↓ food fights

Breastfeeding Multiples: Older Infants

- ↑ Common BF difficulties
  - Nursing strike
  - Biting
- Multiples-related BF difficulties
  - Breastfeeding brawls RT ↑ interaction
  - Jealous breastfeeding RT sharing Mother
  - Feeding frenzies RT jealous BF

Weaning Older Multiples: Babies-Led

- Babies-led weaning
  - MZ = ↑ similar
  - DZ = wide variation
- Mother-encouraged, babies-led weaning RT:
  - Jealous BF
  - Feeding frenzies
  - "Attack" behavior – can't sit down!
  - ↓ Discreet BF in public
  - Imposing BF limits → ↑ continued BF
    - e.g. Night weaning

Weaning Process: Mother-led

- Mother-led, gradual
  - Defined timeline
- Abrupt
  - Babies-led = ↑ common for multiples
    - > 10-12 months
  - Mother-led RT
    - Cultural misconceptions
    - Maternal goals
    - Older babies'/toddlers' behaviors at breast

Strategies RT Breastfeeding Older Babies & Toddler Multiples

- Accept differences RT BF multiples vs. singleton
- Discuss s/s solids, iron "readiness" RT:
  - Individual differences
  - Preterm birth or MZ TTTS
- Offer anticipatory guidance for:
  - Issues RT BF multiples vs. singles
  - Common differences in weaning styles

MOT/MOM References

- Local breastfeeding MOM
- Internet:
  - www.karengromada.com/
  - LLL Forums – BF Multiples
http://forums.llli.org/forumdisplay.php?f=56
  - AP Multiples
http://groups.yahoo.com/group/apmultiples
  - MotheringDotCommune – Multiples
www.mothering.com/discussions/forumdisplay.php?f=158
- Email: kkgromada@gmail.com

- Multiples-specific BF Books
  1. *Mothering Multiples: Breastfeeding and Caring for Twins or More* (07, LLLI)
  2. *Oh Yes You Can Breastfeed Twins!* (07, Author)
     - April Rudat, MSEd, RD/LDN

www.ohyesyoucanbreastfeedtwins.com